

is hydrogen, straight-chain or branched alkyl having up to 6 carbon atoms or cycloalkyl having 3 to 6 carbon atoms.

please replace the paragraph beginning at page 25, line 35 with the following rewritten paragraph:

X

is straight-chain or branched alkylene having up to 6 carbon atoms or straightchain or branched alkenediyl having up to 6 carbon atoms which may each contain one to three groups from the group consisting of phenyloxy, CO and CONR<sup>29</sup>,

Please replace the paragraph beginning at page 26, line 5 with the following rewritten paragraph:

is hydrogen, straight-chain or branched alkyl having up to 6 carbon atoms or cycloalkyl having 3 to 6 carbon atoms,

### In the claims:

Please cancel claims 1, 2, and 14-18.

Please amend claims 3-13 as shown below:

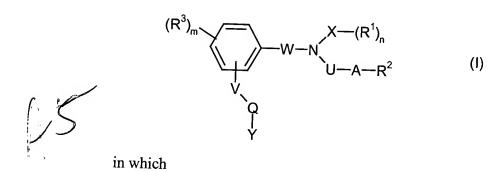
Please add new claims 19-27 as shown below:

- (Cancelled) Use of compounds which are also capable of stimulating soluble guanylate 1. cyclase independently of the haem group in the enzyme, for preparing medicaments for the treatment of cardiovascular disorders, such as angina pectoris, ischaemia and cardiac insufficiency.
- 2. (Cancelled) Use of compounds which are also capable of stimulating soluble guanylate cyclase independently of the haem group in the enzyme, for preparing medicaments for



the treatment of arteriosclerosis, hypertension, thromboembolic disorders, venous disorders and fibrotic disorders, such as, in particular, hepatic fibrosis.

### 3. (Amended) A compound of the general formula (I)



V is absent, O, NR<sup>4</sup>, NR<sup>4</sup>CONR<sup>4</sup>, NR<sup>4</sup>CO, NR<sup>4</sup>SO<sub>2</sub>, COO, CONR<sup>4</sup> or S(O)<sub>0</sub>,

in which

- R<sup>4</sup>, independently of any other radical R<sup>4</sup> which may be present, is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, cycloalkyl having 3 to 8 carbon atoms, aryl having 6 to 10 carbon atoms or arylalkyl having 7 to 18 carbon atoms, where the aryl radical for its part may be mono- or polysubstituted by halogen, alkyl, or alkoxy having up to 6 carbon atoms,
- o is 0, 1 or 2,
- Q is absent, straight-chain or branched alkylene, straight-chain or branched alkenediyl or straight-chain or branched alkynediyl, having in each case up to 12 carbon atoms, which may in each case contain one or more groups selected from the group consisting of O, S(O)<sub>p</sub>, NR<sup>5</sup>, CO, NR<sup>5</sup>SO<sub>2</sub> and CONR<sup>5</sup> and which



may be mono- or polysubstituted by halogen, hydroxyl or alkoxy having up to 4 carbon atoms, where optionally any two atoms of the abovementioned chain may be attached to one another forming a three- to eight-membered ring,

in which

R<sup>5</sup> is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms, which may be substituted by halogen or alkoxy having up to 4 carbon atoms, and

A5.

p is 0, 1 or 2,

is hydrogen, NR<sup>8</sup>R<sup>9</sup>, aryl having 6 to 10 carbon atoms, an aromatic or saturated heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, or straight-chain or branched cycloalkyl having 3 to 8 carbon atoms, which may also be attached via N,

wherein the cyclic radicals may in each case be mono- to trisubstituted by straight-chain or branched alkyl, straight-chain or branched alkenyl, straight-chain or branched alkoxy, straight-chain or branched halogenoalkyl, straight-chain or branched halogenoalkoxy having in each case up to 8 carbon atoms, straight-chain or branched cycloalkyl having 3 to 8 carbon atoms, halogen, hydroxyl, CN, SR<sup>6</sup>, NO<sub>2</sub>, NR<sup>8</sup>R<sup>9</sup>, NR<sup>7</sup>COR<sup>10</sup>, NR<sup>7</sup>CONR<sup>7</sup>R<sup>10</sup> or CONR<sup>11</sup>R<sup>12</sup>.

in which

R<sup>6</sup> is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, straight-chain or branched halogenoalkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,

- R<sup>7</sup> independently of any other radical R<sup>7</sup> which may be present is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,
- R<sup>8</sup>, R<sup>9</sup>, R<sup>11</sup> and R<sup>12</sup> independently of one another are hydrogen, straight-chain or branched alkyl, straight-chain or branched alkenyl having up to 8 carbon atoms, aryl having 6 to 10 carbon atoms, an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, arylalkyl having 8 to 18 carbon atoms, cycloalkyl having 3 to 8 carbon atoms or a radical of the formula SO<sub>2</sub>R<sup>13</sup>, wherein the aryl radical for its part may be mono- or polysubstituted by halogen, hydroxyl, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCOR<sup>7</sup>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms, or two substituents R<sup>8</sup> and R<sup>9</sup> or R<sup>11</sup> and R<sup>12</sup> may be attached to one another forming a five- or six-membered ring which may contain O or N,

and wherein

- R<sup>13</sup> is straight-chain or branched alkyl having up to 4 carbon atoms or aryl having 6 to 10 carbon atoms, where the aryl radical for its part may be mono- or polysubstituted by halogen, CN, NO<sub>2</sub>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms,
- R<sup>10</sup> is hydrogen, straight-chain or branched alkyl having up to 12 carbon atoms, straight-chain or branched alkenyl having up to 12 carbon atoms, aryl having 6 to 10 carbon atoms, an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting



of S, N and O, or cycloalkyl having 3 to 8 carbon atoms, which may furthermore optionally be substituted by halogen, hydroxyl, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCOR<sup>7</sup>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms;

and/or the cyclic radicals in Y may in each case be mono- to trisubstituted by aryl having 6 to 10 carbon atoms, or by an aromatic or saturated heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, which may also be attached via N, which may be attached directly or via a group O, S, SO, SO<sub>2</sub>, NR<sup>7</sup>, SO<sub>2</sub>NR<sup>7</sup>, CONR<sup>7</sup>, straight-chain or branched alkylene, straight-chain or branched alkenediyl, straight-chain or branched alkyloxy, straight-chain or branched oxyalkyloxy, straight-chain or branched sulphonylalkyl, straight-chain or branched thioalkyl having in each case up to 8 carbon atoms and which may be mono- to trisubstituted by straight-chain or branched alkoxy, straight-chain or branched alkoxy, straight-chain or branched halogenoalkyl, straight-chain or branched halogenoalkoxy, carbonylalkyl or straight-chain or branched alkenyl having in each case up to 6 carbon atoms, halogen, SR<sup>6</sup>, CN, NO<sub>2</sub>, NR<sup>8</sup>R<sup>9</sup>, CONR<sup>15</sup>R<sup>16</sup>or NR<sup>14</sup>COR<sup>17</sup>.

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#### in which

- R<sup>14</sup> is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,
- R<sup>15</sup>, R<sup>16</sup> independently of one another are hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, cycloalkyl having 3 to 8 carbon atoms, aryl having 6 to 10 carbon atoms or a radical of the formula SO<sub>2</sub>R<sup>18</sup>, where the aryl radical for its part may be mono- or



polysubstituted by halogen, hydroxyl, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCOR<sup>7</sup>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms, in which

R<sup>18</sup> is straight-chain or branched alkyl having up to 4 carbon atoms or aryl having 6 to 10 carbon atoms, where the aryl radical for its part may be mono- or polysubstituted by halogen, hydroxyl, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCOR<sup>7</sup>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms,

and

 $R^{17}$ 

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is hydrogen, straight-chain or branched alkyl having up to 12 carbon atoms, straight-chain or branched alkenyl having up to 12 carbon atoms, aryl having 6 to 10 carbon atoms, an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, or cycloalkyl having 3 to 8 carbon atoms, which may furthermore optionally be substituted by halogen, hydroxyl, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCOR<sup>7</sup>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms;

and/or the cyclic radicals in Y may be fused with an aromatic or saturated carbocycle having 1 to 10 carbon atoms or an aromatic or saturated heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O,

R<sup>3</sup> is hydrogen, halogen, straight-chain or branched alkyl, straight-chain or branched halogenoalkyl, straight-chain or branched alkoxy, or alkoxycarbonyl having in each case up to 4 carbon atoms, or CN, NO<sub>2</sub> or NR<sup>19</sup>R<sup>20</sup>,



in which

R<sup>19</sup> and R<sup>20</sup> independently of one another are hydrogen, straight-chain or branched alkyl having up to 4 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,

m is an integer from 1 to 4,

W is straight-chain or branched alkylene having up to 6 carbon atoms or straight-chain or branched alkenediyl having up to 6 carbon atoms, which may in each case contain a group selected from the group consisting of O, S(O)<sub>q</sub>, NR<sup>21</sup>, CO and CONR<sup>21</sup>, or is CO, NHCO or OCO,

in which

q is 0, 1 or 2,

R<sup>21</sup> is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,

U is straight-chain or branched alkyl having up to 4 carbon atoms,

A is aryl having 6 to 10 carbon atoms or an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O,

which may optionally be mono- to trisubstituted by halogen, straight-chain or branched alkyl, straight-chain or branched halogenoalkyl, straight-chain or

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branched alkoxy, halogenoalkoxy or alkoxycarbonyl having up to 4 carbon atoms, CN,  $NO_2$  or  $NR^{22}R^{23}$ ,

in which

R<sup>22</sup> and R<sup>23</sup> independently of one another are each hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms, carbonylalkyl or sulphonylalkyl,

R<sup>2</sup> is tetrazolyl, COOR<sup>24</sup> or CONR<sup>25</sup>R<sup>26</sup>,

in which

R<sup>24</sup> is hydrogen, alkyl having 1 to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,

 $R^{25}$  and  $R^{26}$  independently of one another are each hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, cycloalkyl having 3 to 8 carbon atoms or a radical of the formula  $SO_2R^{27}$ , or  $R^{25}$  and  $R^{26}$  together form a five- or six-membered ring which may contain N or O,

in which

R<sup>27</sup> is straight-chain or branched alkyl having up to 4 carbon atoms or aryl having 6 to 10 carbon atoms, where the aryl radical for its part may be mono- or polysubstituted by halogen, CN, NO<sub>2</sub>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms,



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is straight-chain or branched alkylene having up to 12 carbon atoms or straight-chain or branched alkenediyl having up to 12 carbon atoms which may in each case contain one to three groups selected from the group consisting of O, S(O)<sub>r</sub>, NR<sup>28</sup>, CO and CONR<sup>29</sup>, or is aryl or aryloxy having 6 to 10 carbon atoms, where the aryl radical for its part may be mono- or polysubstituted by halogen, CN, NO<sub>2</sub>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms, where optionally any two atoms of the abovementioned chains are attached to one another via an alkyl chain, forming a three- to eight-membered ring,

in which

r is 0, 1 or 2,

R<sup>28</sup> is hydrogen, alkyl having 1 to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,

R<sup>29</sup> is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,

n is 1 or 2; and

R<sup>1</sup> is tetrazolyl, COOR<sup>30</sup> or CONR<sup>31</sup>R<sup>32</sup>,

in which

R<sup>30</sup> is hydrogen, alkyl having 1 to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,



 $R^{31}$  and  $R^{32}$  independently of one another are each hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, cycloalkyl having 3 to 8 carbon atoms or a radical of the formula  $SO_2R^{33}$ .

in which

R<sup>33</sup> is straight-chain or branched alkyl having up to 4 carbon atoms or aryl having 6 to 10 carbon atoms, where the aryl radical for its part may be mono- or polysubstituted by halogen, CN, NO<sub>2</sub>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms,

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and its stereoisomers and salts.

4. (Amended) A compound according to Claim 3,

in which

V is absent, O, NR<sup>4</sup>, NR<sup>4</sup>CONR<sup>4</sup>, NR<sup>4</sup>CO, NR<sup>4</sup>SO<sub>2</sub>, COO, CONR<sup>4</sup> or S(O)<sub>0</sub>,

in which

R<sup>4</sup> independently of any other radical R<sup>4</sup> which may be present, is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, cycloalkyl having 3 to 8 carbon atoms, aryl having 6 to 10 carbon atoms or arylalkyl having 7 to 18 carbon atoms, where the aryl radical for its part may be mono- or polysubstituted by halogen, alkyl, alkoxy having up to 6 carbon atoms,



o is 0, 1 or 2,

is absent, straight-chain or branched alkylene, straight-chain or branched alkenediyl or straight-chain or branched alkynediyl having in each case up to 12 carbon atoms, which may in each case contain one or more groups selected from the group consisting of O, S(O)<sub>p</sub>, NR<sup>5</sup>, CO, NR<sup>5</sup>SO<sub>2</sub> and CONR<sup>5</sup> and which may be mono- or polysubstituted by halogen, hydroxyl or alkoxy having up to 4 carbon atoms, where optionally any two atoms of the abovementioned chain may be attached to one another forming a three- to eight-membered ring,

in which

Q

R<sup>5</sup> is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms, which may be substituted by halogen or alkoxy having up to 4 carbon atoms, and

p is 0, 1 or 2,

Y is hydrogen, NR<sup>8</sup>R<sup>9</sup>, aryl having 6 to 10 carbon atoms, an aromatic or saturated heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, or straight-chain or branched cycloalkyl having 3 to 8 carbon atoms, which may also be attached via N,

wherein the cyclic radicals may in each case be mono- to trisubstituted by straight-chain or branched alkyl, straight-chain or branched alkenyl, straight-chain or branched alkoxy, straight-chain or branched alkoxyalkoxy, straight-chain or branched halogenoalkyl, straight-chain or branched halogenoalkoxy having in each case up to 8 carbon atoms, straight-chain or branched cycloalkyl having 3 to 8 carbon atoms, halogen, hydroxyl, CN, SR<sup>6</sup>, NO<sub>2</sub>, NR<sup>8</sup>R<sup>9</sup>, NR<sup>7</sup>COR<sup>10</sup>, NR<sup>7</sup>CONR<sup>7</sup>R<sup>10</sup> or CONR<sup>11</sup>R<sup>12</sup>,

in which

- R<sup>6</sup> is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, straight-chain or branched halogenoalkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,
- R<sup>7</sup> independently of any other radical R<sup>7</sup> which may be present is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,

R<sup>8</sup>, R<sup>9</sup>, R<sup>11</sup> and R<sup>12</sup> independently of one another are hydrogen, straight-chain or branched alkyl, straight-chain or branched alkenyl having up to 8 carbon atoms, aryl having 6 to 10 carbon atoms, an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, arylalkyl having 8 to 18 carbon atoms, cycloalkyl having 3 to 8 carbon atoms or a radical of the formula SO<sub>2</sub>R<sup>13</sup>, wherein the alkyl radical for its part may be mono- or polysubstituted by halogen, hydroxyl, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCOR<sup>7</sup>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms, or two substituents R<sup>8</sup> and R<sup>9</sup> or R<sup>11</sup> and R<sup>12</sup> may be attached to one another forming a five- or six-membered ring which may contain O or N,

and wherein

R<sup>13</sup> is straight-chain or branched alkyl having up to 4 carbon atoms or aryl having 6 to 10 carbon atoms, where the aryl radical for its part may be mono- or polysubstituted by halogen, CN, NO<sub>2</sub>, alkyl,



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alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms,

R<sup>10</sup> is hydrogen, straight-chain or branched alkyl having up to 12 carbon atoms, straight-chain or branched alkenyl having up to 12 carbon atoms, aryl having 6 to 10 carbon atoms, an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, or cycloalkyl having 3 to 8 carbon atoms, which may furthermore optionally be substituted by halogen, hydroxyl, CN, NO<sub>2</sub>, NH<sub>2</sub>, NHCOR<sup>7</sup>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms;

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and/or the cyclic radicals in Y may in each case be mono- to trisubstituted by aryl having 6 to 10 carbon atoms, or by an aromatic or saturated heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, which may also be attached via N, which may be attached directly or via a group O, S, SO, SO<sub>2</sub>, NR<sup>7</sup>, SO<sub>2</sub>NR<sup>7</sup>, CONR<sup>7</sup>, straight-chain or branched alkylene, straight-chain or branched alkenediyl, straight-chain or branched alkyloxy, straight-chain or branched oxyalkyloxy, straight-chain or branched sulphonylalkyl, straight-chain or branched thioalkyl having in each case up to 8 carbon atoms and which may be mono- to trisubstituted by straight-chain or branched alkoxyalkoxy, straight-chain or branched alkoxy, straight-chain or branched alkoxyalkoxy, straight-chain or branched halogenoalkyl, straight-chain or branched halogenoalkoxy, carbonylalkyl or straight-chain or branched alkenyl having in each case up to 6 carbon atoms, halogen, SR<sup>6</sup>, CN, NO<sub>2</sub>, NR<sup>8</sup>R<sup>9</sup>, CONR<sup>15</sup>R<sup>16</sup>or NR<sup>14</sup>COR<sup>17</sup>,

in which

- R<sup>14</sup> is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms or cycloalkyl having 3 to 8 carbon atoms,
- R<sup>15</sup>, R<sup>16</sup> independently of one another are hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, cycloalkyl having 3 to 8 carbon atoms or a radical of the formula SO<sub>2</sub>R<sup>18</sup>,

in which

R<sup>18</sup> is straight-chain or branched alkyl having up to 4 carbon atoms or aryl having 6 to 10 carbon atoms, where the aryl radical for its part may be mono- or polysubstituted by halogen, CN, NO<sub>2</sub>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms.

and

R<sup>17</sup> is hydrogen, straight-chain or branched alkyl having up to 12 carbon atoms, straight-chain or branched alkenyl having up to 12 carbon atoms, aryl having 6 to 10 carbon atoms, an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, or cycloalkyl having 3 to 8 carbon atoms, which may furthermore optionally be substituted by halogen, CN, NO<sub>2</sub>, alkyl, alkoxy, halogenoalkyl or halogenoalkoxy having up to 6 carbon atoms;

and/or the cyclic radicals in Y may be fused with an aromatic or saturated carbocycle having 1 to 10 carbon atoms or an aromatic or saturated heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O,



- R<sup>3</sup> is hydrogen, halogen, straight-chain or branched alkyl, straight-chain or branched halogenoalkyl or straight-chain or branched alkoxy having in each case up to 4 carbon atoms,
- m is an integer from 1 to 4,
- W is straight-chain or branched alkylene or straight-chain or branched alkenediyl having in each case up to 4 carbon atoms,

U is - $CH_2$ -,

A is phenyl or an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, which may optionally be mono- to trisubstituted by halogen, straight-chain or branched alkyl, straight-chain or branched halogenoalkyl or straight-chain or branched alkoxy having up to 4 carbon atoms,

 $R^2$  is  $COOR^{24}$ ,

in which

- R<sup>24</sup> is hydrogen or straight-chain or branched alkyl having up to 6 carbon atoms,
- is straight-chain or branched alkylene having up to 8 carbon atoms or straight-chain or branched alkenediyl having up to 8 carbon atoms which may in each case contain one to three groups selected from the group consisting of phenyl, phenyloxy, O, CO and CONR<sup>29</sup>,

in which

 $R^{29}$ is hydrogen, straight-chain or branched alkyl having up to 6 carbon atoms or cycloalkyl having 3 to 6 carbon atoms,

n is 1 or 2, and

 $R^1$ is COOR<sup>30</sup>,

in which

 $R^{30} \\$ is hydrogen or straight-chain or branched alkyl having up to 6 carbon atoms.

5. (Amended) A compound according to Claim 3,

in which

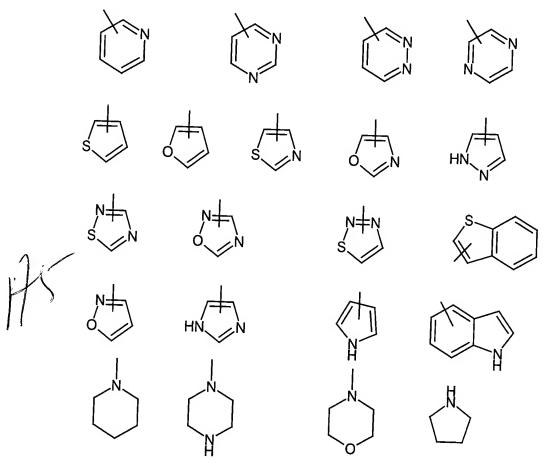
V is absent, O, S or NR<sup>4</sup>,

in which

 $R^4$ is hydrogen or methyl,

Q is absent, straight-chain or branched alkylene having up to 9 carbon atoms or straight-chain or branched alkenediyl or straight-chain or branched alkynediyl having up to 4 carbon atoms which may be monosubstituted by halogen,

Y is H, NR<sup>8</sup>R<sup>9</sup>, cyclohexyl, phenyl, naphtyl or a heterocycle selected from the group consisting of



which may also be attached via N,

wherein the cyclic radicals may in each case be mono- to trisubstituted by straight-chain or branched alkyl, straight-chain or branched alkenyl, straight-chain or branched alkoxy, straight-chain or branched alkoxyalkoxy, straight-chain or branched halogenoalkyl, straight-chain or branched halogenoalkoxy having in each case up to 4 carbon atoms, straight-chain or branched cycloalkyl having 3 to 6 carbon atoms, F, Cl, Br, I, NO<sub>2</sub>, SR<sup>6</sup>, NR<sup>8</sup>R<sup>9</sup>, NR<sup>7</sup>COR<sup>10</sup> or CONR<sup>11</sup>R<sup>12</sup>,

in which

 $R^6$ is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, or straight-chain or branched halogenoalkyl having up to 4 carbon atoms,

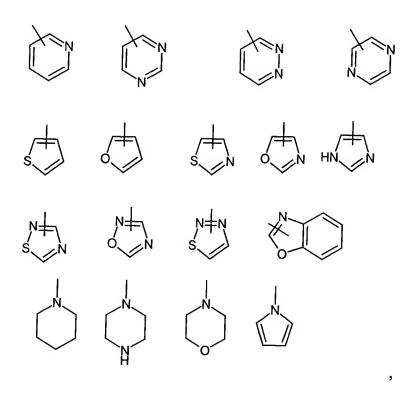
 $R^7$ is hydrogen, or straight-chain or branched alkyl having up to 4 carbon atoms,

 $R^8$ ,  $R^9$ ,  $R^{11}$  and  $R^{12}$ independently of one another are hydrogen, straight-chain or branched alkyl having up to 4 carbon atoms or phenyl, wherein the phenyl radical may be mono- to trisubstituted by F, Cl Br, hydroxyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, s-butyl, i-butyl, tbutyl, methoxy, ethoxy, amino, acetylamino, NO2, CF3, OCF3 or CN, or two substituents R8 and R9 or R11 and R12 may be attached to one another forming a five- or six-membered ring which may be interrupted by O or N,

 $R^{10}$ is hydrogen, straight-chain or branched alkyl having up to 4 carbon atoms or phenyl, where the phenyl radical may be mono- to trisubstituted by F, Cl Br, hydroxyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, s-butyl, i-butyl, tbutyl, methoxy, ethoxy, amino, acetylamino, NO2, CF3, OCF3 or CN;

and/or the cyclic radicals in Y may in each case be mono- to trisubstituted by phenyl or a heterocycle selected from the group consisting of





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which may be attached directly or via a group O, S, SO, SO<sub>2</sub>, NR<sup>4</sup>, SO<sub>2</sub>NR<sup>7</sup>, CONR<sup>7</sup>, straight-chain or branched alkylene, straight-chain or branched alkenediyl, straight-chain or branched alkyloxy, straight-chain or branched oxyalkyloxy, straight-chain or branched sulphonylalkyl, straight-chain or branched thioalkyl having in each case 4 carbon atoms and which may be monot to trisubstituted by straight-chain or branched alkyl, straight-chain or branched alkoxy, straight-chain or branched alkoxy, straight-chain or branched halogenoalkyl or straight-chain or branched alkenyl having in each case up to 4 carbon atoms, F, Cl, Br, I, CN, SCH<sub>3</sub>, OCF<sub>3</sub>, NO<sub>2</sub>, NR<sup>8</sup>R<sup>9</sup> or NR<sup>14</sup>COR<sup>17</sup>,

in which

R<sup>14</sup> is hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, or cycloalkyl having 3 to 8 carbon atoms,



and

R<sup>17</sup> is hydrogen, straight-chain or branched alkyl having up to 12 carbon atoms, straight-chain or branched alkenyl having up to 12 carbon atoms, aryl having 6 to 10 carbon atoms, an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, or cycloalkyl having 3 to 8 carbon atoms, which may furthermore optionally be substituted by F, Cl Br, hydroxyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, s-butyl, i-butyl, t-butyl, methoxy, ethoxy, amino, acetylamino, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> or CN;

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and/or the cyclic radicals in Y may be fused with an aromatic or saturated carbocycle having 1 to 10 carbon atoms or an aromatic or saturated heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O,

- R<sup>3</sup> is hydrogen or fluorine,
- m is an integer from 1 to 2,
- W is CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>-, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, or CH=CHCH<sub>2</sub>,
- U is  $-CH_2$ -,
- A is phenyl, pyridyl, thienyl or thiazolyl which may optionally be mono- to trisubstituted by methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, s-butyl, t-butyl, CF<sub>3</sub>, methoxy, ethoxy, F, Cl, Br,
- $R^2$  is  $COOR^{24}$ ,

in which

R<sup>24</sup> is hydrogen or straight-chain or branched alkyl having up to 4 carbon atoms,

X is straight-chain or branched alkylene having up to 8 carbon atoms or straight-chain or branched alkenediyl having up to 8 carbon atoms which may in each case contain one to three groups selected from the group consisting of phenyl, phenyloxy, O, CO and CONR<sup>29</sup>

in which

R<sup>29</sup> is hydrogen, straight-chain or branched alkyl having up to 6 carbon atoms or cycloalkyl having 3 to 6 carbon atoms,

n is 1 or 2, and

R<sup>1</sup> is COOR<sup>35</sup>, in which

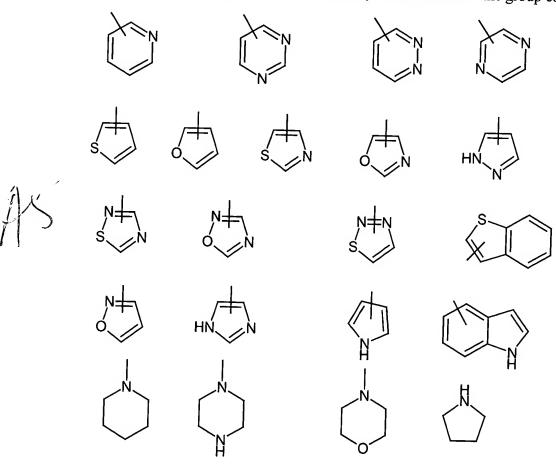
R<sup>35</sup> is hydrogen or straight-chain or branched alkyl having up to 6 carbon atoms.

6. (Amended) A compound according to Claim 3,

in which

V is O,

- Q is straight-chain or branched alkylene having up to 9 carbon atoms or straight-chain or branched alkenediyl or straight-chain or branched alkynediyl having up to 4 carbon atoms which may be monosubstituted by halogen,
- Y is H, cyclohexyl, phenyl or a heterocycle selected from the group consisting of



wherein the cyclic radicals may in each case be mono- to trisubstituted by straight-chain or branched alkyl, straight-chain or branched alkenyl, straight-chain or branched alkoxy, straight-chain or branched alkoxy, straight-chain or branched alkoxyalkoxy, straight-chain or branched halogenoalkyl, straight-chain or branched halogenoalkoxy having in each case up to 4 carbon atoms, straight-chain

or branched cycloalkyl having 3 to 6 carbon atoms, F, Cl, Br, I, NO<sub>2</sub>,  $SR^6$ ,  $NR^8R^9$ ,  $NR^7COR^{10}$  or  $CONR^{11}R^{12}$ ,

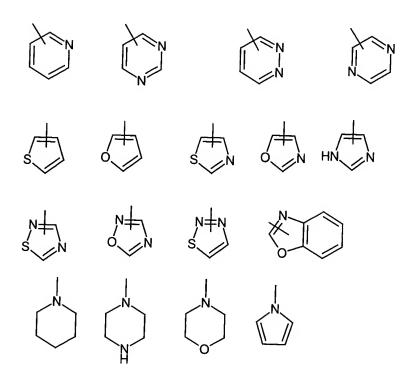
#### in which

- R<sup>6</sup> is hydrogen, straight-chain or branched alkyl having up to 4 carbon atoms or straight-chain or branched halogenoalkyl having up to 4 carbon atoms,
- R<sup>7</sup> is hydrogen, or straight-chain or branched alkyl having up to 4 carbon atoms,
- R<sup>8</sup>, R<sup>9</sup>, R<sup>11</sup> and R<sup>12</sup> independently of one another are hydrogen, straight-chain or branched alkyl having up to 4 carbon atoms or phenyl, wherein the phenyl radical may be mono- to trisubstituted by F, Cl Br, hydroxyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, s-butyl, i-butyl, t-butyl, methoxy, ethoxy, amino, acetylamino, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> or CN, or two substituents R<sup>8</sup> and R<sup>9</sup> or R<sup>11</sup> and R<sup>12</sup> may be attached to one another forming a five- or six-membered ring which may be interrupted by O or N,
- R<sup>10</sup> is hydrogen, straight-chain or branched alkyl having up to 4 carbon atoms or phenyl, where the phenyl radical may be mono- to trisubstituted by F, Cl Br, hydroxyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, s-butyl, i-butyl, t-butyl, methoxy, ethoxy, amino, acetylamino, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> or CN;

and/or the cyclic radicals in Y may in each case be mono- to trisubstituted by phenyl or a heterocycle selected from the group consisting of







75

which may be attached directly or via a group O, S, SO, SO<sub>2</sub>, straight-chain or branched alkylene, straight-chain or branched alkenediyl, straight-chain or branched alkyloxy, straight-chain or branched oxyalkyloxy, straight-chain or branched sulphonylalkyl, straight-chain or branched thioalkyl having in each case up to 4 carbon atoms and which may be mono- to trisubstituted by straight-chain or branched alkyl, straight-chain or branched alkoxy, straight-chain or branched alkoxyalkoxy, straight-chain or branched halogenoalkyl or straight-chain or branched alkenyl having in each case up to 4 carbon atoms, F, Cl, Br, I, CN, SCH<sub>3</sub>, OCF<sub>3</sub>, NO<sub>2</sub>, NR<sup>8</sup>R<sup>9</sup> or NR<sup>14</sup>COR<sup>17</sup>,

in which

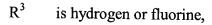
R<sup>14</sup> is hydrogen, straight-chain or branched alkyl having up to 6 carbon atoms or cycloalkyl having 3 to 6 carbon atoms,



and

R<sup>17</sup> is hydrogen, straight-chain or branched alkyl having up to 6 carbon atoms, straight-chain or branched alkenyl having up to 6 carbon atoms, aryl having 6 to 10 carbon atoms, an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, or cycloalkyl having 3 to 6 carbon atoms, which may furthermore optionally be substituted by F, Cl, Br, hydroxyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, s-butyl, i-butyl, t-butyl, methoxy, ethoxy, amino, acetylamino, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> or CN;

and/or the cyclic radicals in Y may be fused with an aromatic or saturated carbocycle having 1 to 10 carbon atoms or an aromatic or saturated heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O,



m is an integer from 1 to 2,

W is  $-CH_2$ - or  $-CH_2CH_2$ -,

U is - $CH_2$ -,

A is phenyl which may optionally be mono- to trisubstituted by methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, s-butyl, t-butyl, CF<sub>3</sub>, methoxy, ethoxy, F, Cl, Br,

R<sup>2</sup> is COOR<sup>24</sup>,

in which

R<sup>24</sup> is hydrogen or straight-chain or branched alkyl having up to 4 carbon atoms,

X is straight-chain or branched alkylene having up to 6 carbon atoms or straight-chain or branched alkenediyl having up to 6 carbon atoms, which may each contain one to three groups selected from the group consisting of phenyloxy, O, CO and CONR<sup>29</sup>,

in which

R<sup>29</sup> is hydrogen, straight-chain or branched alkyl having up to 6 carbon atoms or cycloalkyl having 3 to 6 carbon atoms,



is 1 or 2, and

 $R^1$  is  $COOR^{35}$ ,

in which

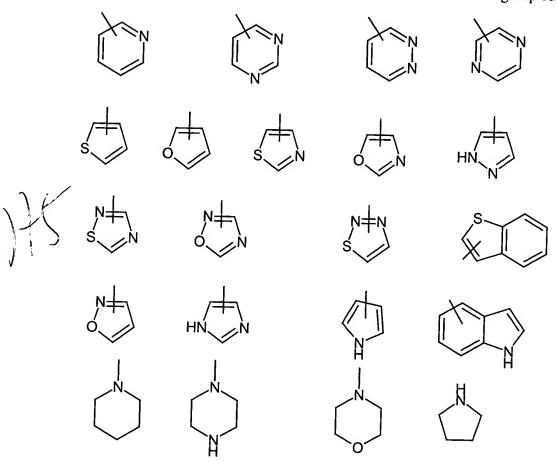
R<sup>35</sup> is hydrogen or straight-chain or branched alkyl having up to 4 carbon atoms.

7. (Amended) A compound according to Claim 3,

in which

V is O,

- Q is straight-chain or branched alkylene having up to 9 carbon atoms or straightchain or branched alkenediyl or straight-chain or branched alkynediyl having up to 4 carbon atoms which may be monosubstituted by halogen,
- Y is H, cyclohexyl, phenyl or a heterocycle selected from the group consisting of



wherein the cyclic radicals may in each case be mono- to trisubstituted by straightchain or branched alkyl, straight-chain or branched alkenyl, straight-chain or branched alkynyl, straight-chain or branched alkoxy, straight-chain or branched alkoxyalkoxy, straight-chain or branched halogenoalkyl, straight-chain or branched halogenoalkoxy, having in each case up to 4 carbon atoms, straight-

chain or branched cycloalkyl having 3 to 6 carbon atoms, F, Cl, Br, I, NO<sub>2</sub>,  $SR^6$ ,  $NR^8R^9$ ,  $NR^7COR^{10}$  or  $CONR^{11}R^{12}$ ,

in which

R<sup>6</sup> is hydrogen, straight-chain or branched alkyl having up to 4 carbon atoms or straight-chain or branched halogenoalkyl having up to 4 carbon atoms,

R<sup>7</sup> is hydrogen or straight-chain or branched alkyl having up to 4 carbon atoms,

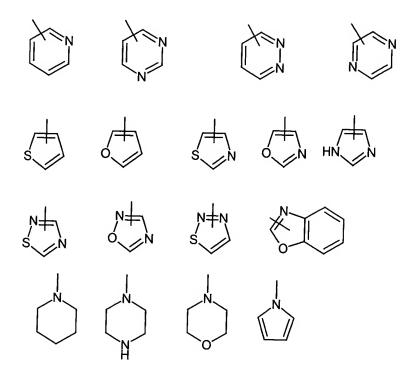
R<sup>8</sup>, R<sup>9</sup>, R<sup>11</sup> and R<sup>12</sup> independently of one another are hydrogen, straight-chain or branched alkyl having up to 4 carbon atoms or phenyl, where the phenyl radical may be mono- to trisubstituted by F, Cl Br, hydroxyl, methyl, ethyl, n- propyl, i-propyl, n-butyl, s-butyl, i-butyl, t-butyl, methoxy, ethoxy, amino, acetylamino, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> or CN, or two substituents R<sup>8</sup> and R<sup>9</sup> or R<sup>11</sup> and R<sup>12</sup> may be attached to one another forming a five- or six-membered ring which may be interrupted by O or N,

R<sup>10</sup> is hydrogen, straight-chain or branched alkyl having up to 4 carbon atoms or phenyl,
where the phenyl radical may be mono- to trisubstituted by F, Cl Br, hydroxyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, s-butyl, i-butyl, t-butyl, methoxy, ethoxy, amino, acetylamino, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> or CN;

and/or the cyclic radicals in Y may in each case be mono- to trisubstituted by phenyl or a heterocycle selected from the group consisting of

HS





M.

which may be attached directly or via a group O, S, SO, SO<sub>2</sub>, straight-chain or branched alkylene, straight-chain or branched alkenediyl, straight-chain or branched alkyloxy, straight-chain or branched oxyalkyloxy, straight-chain or branched sulphonylalkyl, straight-chain or branched thioalkyl having in each case up to 4 carbon atoms and which may be mono- to trisubstituted by straight-chain or branched alkyl, straight-chain or branched alkoxy, straight-chain or branched alkoxyalkoxy, straight-chain or branched halogenoalkyl or straight-chain or branched alkenyl having in each case up to 4 carbon atoms, F, Cl, Br, I, CN, SCH<sub>3</sub>, OCF<sub>3</sub>, NO<sub>2</sub>, NR<sup>8</sup>R<sup>9</sup> or NR<sup>14</sup>COR<sup>17</sup>,

in which

R<sup>14</sup> is hydrogen, straight-chain or branched alkyl having up to 6 carbon atoms or cycloalkyl having 3 to 6 carbon atoms,



and

R<sup>17</sup> is hydrogen, straight-chain or branched alkyl having up to 6 carbon atoms, straight-chain or branched alkenyl having up to 6 carbon atoms, aryl having 6 to 10 carbon atoms, an aromatic heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms selected from the group consisting of S, N and O, or cycloalkyl having 3 to 6 carbon atoms, which may furthermore optionally be substituted by F, Cl Br, hydroxyl, methyl, ethyl, n-propyl, i-propyl, n-butyl, s-butyl, i-butyl, t-butyl, methoxy, ethoxy, amino, acetylamino, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> or CN;

M

and/or the cyclic radicals in Y may be fused with an aromatic or saturated carbocycle having 1 to 10 carbon atoms or an aromatic or saturated heterocycle having 1 to 9 carbon atoms and up to 3 heteroatoms from the group consisting of S, N and O,

- R<sup>3</sup> is hydrogen or fluorine,
- m is an integer from 1 to 2,
- W is  $-CH_2$  or  $-CH_2CH_2$ -,
- U is - $CH_2$ -,
- A is phenyl which may optionally be mono- to trisubstituted by methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, s-butyl, t-butyl, CF<sub>3</sub>, methoxy, ethoxy, F, Cl, or Br,
- R<sup>2</sup> is COOH,

is straight-chain or branched alkylene having up to 6 carbon atoms or straight-chain or branched alkenediyl having up to 6 carbon atoms which may in each case contain one to three groups selected from the group consisting of phenyloxy, O, CO and CONR<sup>29</sup> in which

R<sup>29</sup> is hydrogen, straight-chain or branched alkyl having up to 6 carbon atoms or cycloalkyl having 3 to 6 carbon atoms,

n is 1 or 2, and

R<sup>1</sup> is COOH.

(Amended) A compound according to Claim 3,

in which

V is O,

Q is  $CH_2$ ,

Y is phenyl which is substituted by a radical selected from the group consisting of 2-phenylethyl, cyclohexyl, 4-chlorophenyl, 4-methoxyphenyl, 4-trifluoromethylphenyl, 4-cyanophenyl, 4-chlorophenoxy, 4-methoxyphenoxy, 4-trifluoromethylphenoxy, 4-cyanophenoxy, and 4-methylphenyl,

R<sup>3</sup> is hydrogen or fluorine,

m is an integer from 1 to 2,

U is -
$$CH_2$$
-,

- $R^2$  is COOH, where  $R_2$  is located in the 4-position relative to the radical U,
- X is  $(CH_2)_4$ , and

 $R^1$  is COOH.

- 9. (Amended) A process for preparing compounds of the general formula (I), comprising:
  - (a) reacting compounds of the formula (II)

$$(R^3)_m$$
 $W-N$ 
 $U-A-R^2$ 
 $(II)$ 

with compounds of the formula (III)

$$E-X-R^1$$
 (III)

in which

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, V, Q, Y, W, X, U, A and m are as defined in Claim 3, and

E is either a leaving group which is substituted in the presence of a base or is an optionally activated hydroxyl function;

or

(b) reacting compounds of the formula (IV)



$$N \longrightarrow X \longrightarrow R^1$$
 $U \longrightarrow A - R^2$ 
(IV)

with compounds of the formula (V)

$$(R^3)_m$$
  $W$   $E$   $(V)$ 

in which

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, V, Q, Y, W, X, U, A and m are as defined in Claim 3, and

E is either a leaving group which is substituted in the presence of a base or is an optionally activated hydroxyl function;

or

(c) reacting compounds of the formula (VI)

$$(R^3)_m$$
  $W \longrightarrow W$   $X \longrightarrow R^1$ 

with compounds of the formula (VII)

$$E-U-A-R^2$$
 (VII)

in which

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, V, Q, Y, W, X, U, A and m are as defined in Claim 3, and

E is either a leaving group which is substituted in the presence of a base or is an optionally activated hydroxyl function;

or

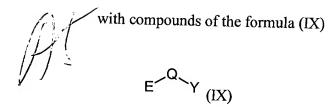
(d) reacting compounds of the formula (VIII),

$$(R^3)_m$$
  $W-N-X-R^1$   $VA-R^2$  (VIII)

in which

Va is O or S and

W, A, X, U, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and m are as defined in Claim 3,



in which

Q, Y are as defined in Claim 3, and

E is either a leaving group which is substituted in the presence of a base or is an optionally activated hydroxyl function;

or

(e) reacting compounds of the formula (X)



in which

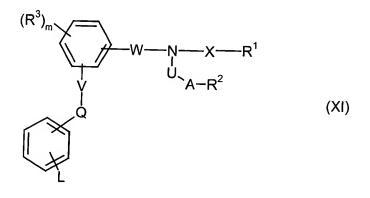
R<sup>3</sup>, V, Q, Y, W, X, U, A and m are as defined in Claim 3,

 $R^{1}_{b}$  and  $R^{2}_{b}$  independently each represent CN or COOAlk, where Alk represents a straight-chain or branched alkyl radical having up to 6 carbon atoms,

with aqueous solutions of strong acids or strong bases to convert them into the corresponding free carboxylic acids;

or

(f) reacting compounds of the formula (XI)



in which

 $R^{1}$ ,  $R^{2}$ ,  $R^{3}$ , V, Q, Y, W, X, U, A and m are as defined in Claim 3,

L represents Br, I or the group CF<sub>3</sub>SO<sub>2</sub>-O,

with compounds of the formula (XII)

M-Z (XII)

in which

AS

M represents an aryl or heteroaryl radical, a straight-chain or branched alkyl, alkenyl or alkynyl radical or cycloalkyl radical or represents an arylalkyl, an arylalkenyl or an arylalkynyl radical, and

Z represents the groupings –B(OH)<sub>2</sub>, -CH≡CH, -CH=CH<sub>2</sub> or -Sn(nBu)<sub>3</sub>,

in the presence of a palladium compound, if appropriate additionally in the presence of a reducing agent and further additives and in the presence of a base;

or

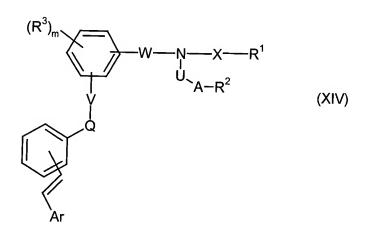
(g) reacting compounds of the formula (XIII)

in which

Ar represents an aryl or heteroaryl radical,

E is a leaving group which is substituted in the presence of a base,

according to process D with compounds of the formula (VIII) and hydrogenating the resulting compounds of the formula (XIV)



with hydrogen in the presence of a catalyst.

10. (Amended) A compound of the formula (II)

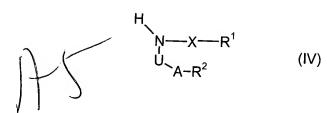


$$(R^3)_m$$
 $W-N$ 
 $U-A-R^2$ 
 $(II)$ 

in which

V, Q, Y, R<sup>3</sup>, m, W, N, U, A and R<sup>2</sup> are as defined in Claim 3.

# 11. (Amended) A compound of the formula (IV)



in which

U, A, X,  $R^1$  and  $R^2$  are as defined in Claim 3.

## 12. (Amended) A compound of the formula (VI)

$$(R^3)_m$$
  $W \longrightarrow W$   $(VI)$ 

in which

A

V, Q, Y, R<sup>3</sup>, m, W, X and R<sup>1</sup> are as defined in Claim 3.

- 13. (Amended) A pharmaceutical composition comprising at least one compound of the general formula (I) according to claim 3, and a pharmaceutically acceptable carrier.
- 14. (Cancelled) Use of compounds of the formula (I) according to any of the preceding claims for preparing a medicament for the treatment of cardiovascular disorders.
- 15. (Cancelled) Use of compounds of the general formula (I) according to any of the preceding claims for preparing medicaments for the treatment of angina pectoris, ischaemias and cardiac insufficiency.
- 16. (Cancelled) Use of compounds of the general formula (I) according to any of the preceding claims for preparing medicaments for the treatment of hypertension, thromboembolic disorders, arteriosclerosis and venous disorders.
- 17. (Cancelled) Use of compounds of the general formula (I) according to any of the preceding claims for preparing medicaments for the treatment of fibrotic disorders.
- 18. (Cancelled) Use according to Claim 16, characterized in that the fibrotic disorder is hepatic fibrosis.
- 19. (New, replacing original claim 1) A method of treating a cardiovascular disorder, comprising administering to a mammal an effective amount of a compound which is capable of stimulating soluble guanylate cyclase independently of the haem group in the enzyme.

- 20. (New) The method of claim 19 wherein said cardiovascular disorder is angina pectoris, ischaemia or cardiac insufficiency.
- 21. (New) A method of treating arteriosclerosis, hypertension, thromboembolic disorders, venous disorders, or fibrotic disorders, comprising administering to a mammal an effective amount of a compound which is capable of stimulating soluble guanylate cyclase independently of the haem group in the enzyme.
- 22. (New) The method of claim 21, wherein said fibrotic disorder is hepatic fibrosis.
- 23. (New) A method of treating a cardiovascular disorder, comprising administering to a mammal an effective amount of a compound of formula (I) according to claim 3.
- 24. (New) The method of claim 23, wherein said cardiovascular disorder is angina pectoris, ischaemia, or cardiac insufficiency.
- 25. (New) A method of treating hypertension, thromboembolic disorders, arteriosclerosis, or venous disorders, comprising administering to a mammal an effective amount of a compound of formula (I) according to claim 3.
- 26. (New) A method of treating a fibrotic disorder, comprising administering to a mammal an effective amount of a compound of formula (I) according to claim 3.
- 27. (New) The method of claim 26, wherein said fibrotic disorder is hepatic fibrosis.

### Remarks / Explanations

As a result of this preliminary amendment, claims 3-13 and 19-27 are pending in the application. Claims 1, 2, and 14-18 have been canceled. New claims 19 and 20 replace original